



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,054	01/03/2002	Michael Wand	75-99	5769

23713 7590 11/05/2004

GREENLEE WINNER AND SULLIVAN P C  
4875 PEARL EAST CIRCLE  
SUITE 200  
BOULDER, CO 80301

EXAMINER

WU, SHEAN CHIU

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/038,054

Applicant(s)

WAND ET AL.

Examiner

Shean C. Wu

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-42 is/are pending in the application.
- 4a) Of the above claim(s) 2-11, 13, 16-40 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 12, 20-24 and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-13 and 15-42 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election (Office Action mailed 7/25/03)*

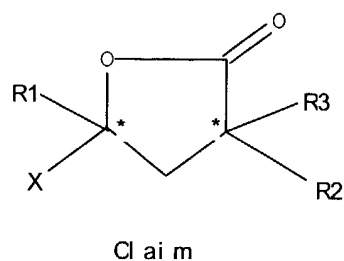
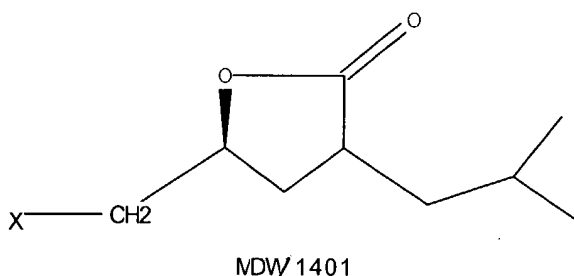
1. Claims 1, 25, 30, 35 and 38 are generic to a plurality of disclosed patentably distinct species comprising different chemical structures. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.
2. During a telephone conversation with Susan Doughty on 7/13/2003 a provisional election was made with traverse to prosecute the invention of compound 1401 on page 25, which reads on Claims 1, 12, 15 and 20-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2-11, 13-14, 16-19 and 25-40 have withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
3. *(On 1/23/04)*, Applicant made a provisional election with traverse of the species of claim 8, and if further required, compound MDW 1401. Applicant confirms this election with traverse. It is believed it would not be burdensome to search all species together. In addition, claims 1, 25, 30, 35 and 38 are believed to be allowable generic claims. It is believed claim 40 should be included in the claims under consideration, since compound MDW 1401 and the elected species read on claims 40. Reconsideration and withdrawal of the election requirement is respectfully requested.
4. *(On 2/24/04 the Office Action mailed)*, the elected species MDW 1401 is allowable over the prior art. Then the Examiner further searches the compound having a phenylpyrimidinyl core

Art Unit: 1756

with an oxygen-containing three membered-ring, which reads on Claims 1-2, 7, 12, 15, 18, 20-23, 35-36 and 39. Therefore, Claims 3-6, 8-11, 13-14, 16-17, 19, 24-34 and 37-38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

5. (8/24/04) Response to the office Action mailed (2/24/04), Applicants state that claim 8 reads on the originally elected species and should be included in the claims under consideration. Claim 9 also contains an oxygen-containing five-membered ring and should be included in the claims under consideration. In addition, it is believed Claim 24 should be included in the claims under consideration because it provides a concentration limitation to a claim under consideration (claim 23). New claim 40 should also be included in the claims under consideration because it reads on the elected species. New claim 40 is supported by the specification on page 4 and page 3, last paragraph. New compound claim 41 has been added which reads on the elected species and is supported by the specification as filed on page 3, Last paragraph and page 6, last paragraph. New composition claim 42 has been added which depends from claim 40 and which reads on the elected species. No new matter is added by any amendment or new claim.

6. Response to Applicants argument on Remarks (8/24/04), the Examiner carefully reviews the elected species MDW 1401, which only reads on claims 1, 12, 15, 20-24 and 41. Claims 2, 8 and 40 are not part of elected species because the CR groups of these claims do not encompass the elected species. The XCR groups in the claims and elected species are compared as below



, which the structure MDW1401 cannot read on the present claim because  $R^1$  and  $R^3$  in the claims are defined as a lower alkyl or an alkenyl group, optionally substituted with one or more halogens. Therefore, the claims 2-11, 13, 16-19, 25-40 and 42 are withdrawn from consideration.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 12 and 21-24 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 7-309858.

The reference discloses an optically active compound having lactone group shown in formulae I and III. The reference compound is suitable for a ferroelectric chiral liquid crystal element. The preparation of the reference compound is disclosed from sections [047]-[049]. Particularly, see the compounds 245-246, 248-250 and 253-254, which have

fluorinated side group and as the present claim. The concentration range of the reference compound used in liquid crystal composition is from 1-40%. Also, see sections [0161] and [0167], which the reference compounds have 3 wt% in the liquid crystal composition. The reference anticipates the claimed invention because the right-hand side group of the reference,  $X_2-L1(or L2)-A_4-R_2$ , is a chiral group. Regarding to claim 23, the reference also inherently anticipates the claimed invention because the reference comprises the present optically active compound and the host mixture used in ferroelectric liquid crystal composition.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-309858.

The reference differs from the claim in that the claim has same number of m and n. Because the notations h and i in group (v) on page 4 are from 1 to 10 and 0 to 7, respectively, it would have been obviously to those skilled in the art to select the same number for m and n to arrive at the claimed invention.

11. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

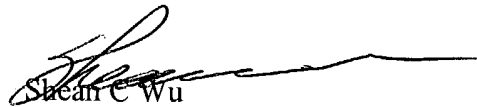
12. Applicant's arguments, filed 8/24/04, with respect to the rejections of claim(s) 1, 12, 20-24 and 41 under Gough (US 2002/0195,585) and US 09/754,034, now US patent 6,759,101 have been fully considered and are persuasive. See the declaration and terminal disclaimer filed 08/24/04, therefore, the rejection has been withdrawn. However, upon further consideration, the previous rejection (7/25/03) under JP 7-309,858 is still maintained.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C. Wu whose telephone number is 571-272-1393. The examiner can normally be reached on 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1756

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shean C Wu  
Primary Examiner  
Art Unit 1756

SCW